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Amendment to the Claims:

Please cancel Claims 1-7 and 22-27 without prejudice or disclaimer; amend Claims 8 and 19-21; and add new Claim 28 as set forth below.

1-7. (Canceled)

8. (Currently amended) A process for preparing a modified hemoglobin molecule (Hb), comprising the steps of:

- (a) reacting Hb with 8-15 fold excess of iminothiolane to form thiolated Hb; and
- (b) reacting the thiolated Hb with 16-30 fold excess of Polyethylene glycol (PEG) functionalized with a maleimide moiety, to form the modified Hb.

9. (Original) The process of Claim 8, wherein Hb is reacted with 9-12 fold excess iminothiolane in step (a).

10. (Original) The process of Claim 8, wherein Hb is reacted with about 10 fold excess iminothiolane in step (a).

11. (Original) The process of Claim 8, wherein the thiolated Hb is reacted with 18-22 fold excess PEG functionalized with a maleimide moiety in step (b).

12. (Original) The process of Claim 8, wherein the thiolated Hb is reacted with about 20 fold excess PEG functionalized with a maleimide moiety in step (b).

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13. (Original) The process of Claim 8, wherein Hb is reacted with 9-12 fold excess iminothiolane in step (a), and the thiolated Hb is reacted with 18-22 fold excess PEG functionalized with a maleimide moiety in step (b).

14. (Original) The process of Claim 8, wherein Hb is reacted with 9-12 fold excess iminothiolane in step (a), and the thiolated Hb is reacted with about 20 fold excess PEG functionalized with a maleimide moiety in step (b).

15. (Original) The process of Claim 8, wherein Hb is reacted with about 10 fold excess iminothiolane in step (a), and the thiolated Hb is reacted with 18-22 fold excess PEG functionalized with a maleimide moiety in step (b).

16. (Original) The process of Claim 8, wherein Hb is reacted with about 10 fold excess iminothiolane in step (a), and the thiolated Hb is reacted with about 20 fold excess PEG functionalized with a maleimide moiety in step (b).

17. (Previously presented) The process of Claim 8, wherein PEG has a molecular weight of 3000-10,000 daltons.

18. (Previously presented) The process of Claim 8, wherein PEG has a molecular weight of about 5,000 daltons.

19. (Currently amended) The process of Claim 8, wherein the modified Hb does not produce hypertension in a subject is non-hypertensive.

20. (Currently amended) The process of Claim 17, wherein the modified Hb does not produce hypertension in a subject is non-hypertensive.

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21. (Currently amended) The process of Claim 18, wherein the modified Hb does not produce hypertension in a subject is non-hypertensive.

22-27. (Canceled)

28. (New) The process of Claim 8, wherein the modified HB has six ± one PEG chains.